

x

17	5	16	1	7	11	6	3	14	12	9	4	15	2	8	18	13	10
115	31	108	3	45	73	38	17	94	80	59	24	101	10	53	122	87	66

y

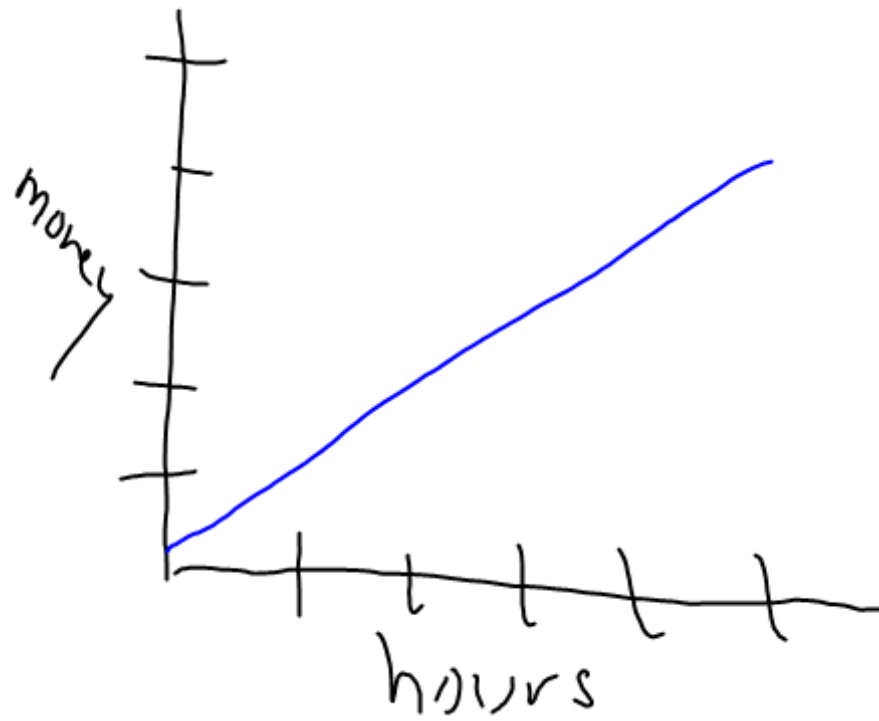
Rule: Goes up by 7

Rate:  $7x - 4$

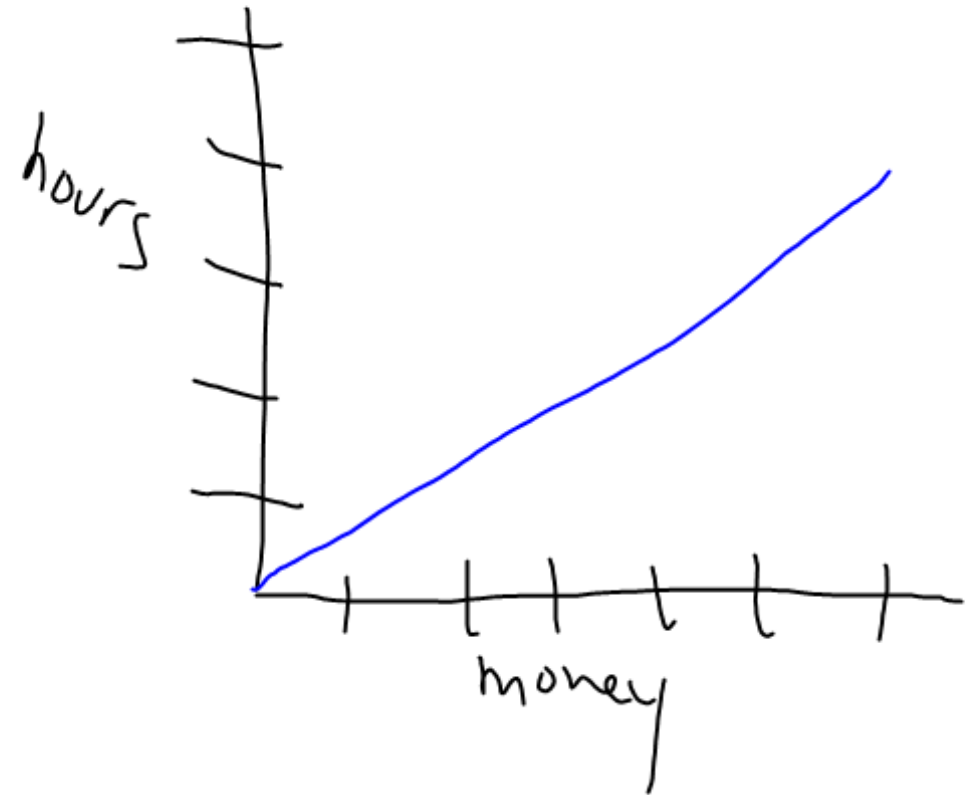
4	5	6	7	8	9	10	11	12
24	31	38	45					

$5 \times 6 = 30$   
 $4 \times 6 = 24$   
 $3 \times 6 = 18$   
 $2 \times 6 = 12$   
 $1 \times 6 = 6$

$+1$   
 $-0$   
 $-1$   
 $-2$   
 $-3$



$$\frac{15}{1}$$



$$\frac{1}{15}$$

3) Otto's car began the week with a full tank of gas. Otto drove to and from work, a total of 320 miles. He then filled his tank with 14.7 gallons of gas.

- How many miles per gallon (mpg) does Otto's car get?
- How far could Otto drive using only 5 gallons of gas?
- When Otto's car recently broke down, he rented a newer model car. Otto drove the same distance, 320 miles, but it only took 11.5 gallons of gas. What was the rate of miles per gallon for the rental car?
- Which car can go more on 10 gallons of gas?

a)  $320 \text{ miles} / 14.7 \text{ gallons} = \boxed{21.76 \text{ mpg}}$

b)  $21.7 \text{ mpg} \times 5 = 108.5 \text{ miles}$

c)  $320 \div 11.5 = 27.82 \text{ mpg}$

d) The second car  
Because it gets more mpg

# Direct Variation

$$y = kx$$

$y$  &  $x$  are Directly proportionate

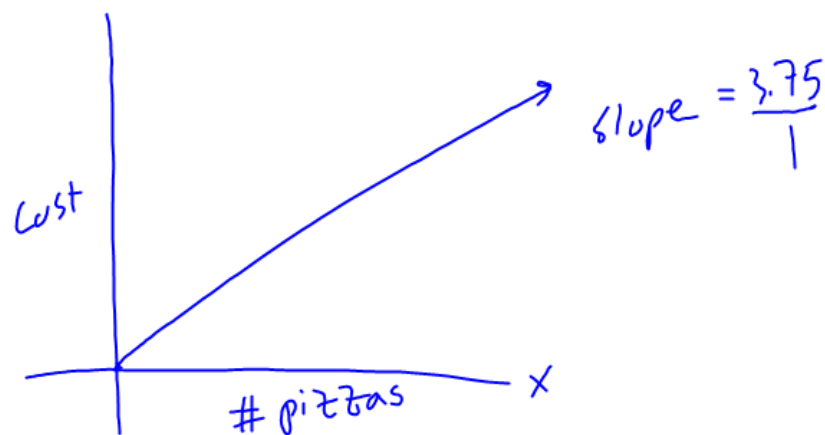
$k$  is a constant of Variation  
RATE

miles  $\nearrow y = 21.76 \text{ mpg } x \nwarrow$  gallons

You are having a party this weekend, and want to make sure you have enough food. You have a coupon for 4 pizzas for \$15.

- a) What is the cost of 1 pizza  $\$3.75$   $\frac{1}{0.47}$
- b) Write an equation to represent the number of pizza purchased compared to the cost  $x \cdot 3.75 = C$   $x = \text{pizzas}$   $C = \text{cost}$
- c) How much will 10 pizzas cost  $37.50$
- d) If you have \$60 how many pizzas can you buy? 16
- e) make a table & graph to represent this

x	y
0	0
1	3.75
2	7.50
3	11.25
4	15



- Sect. 3.2  
#4-8

- Quiz Monday